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# The performative idiom and PSMs

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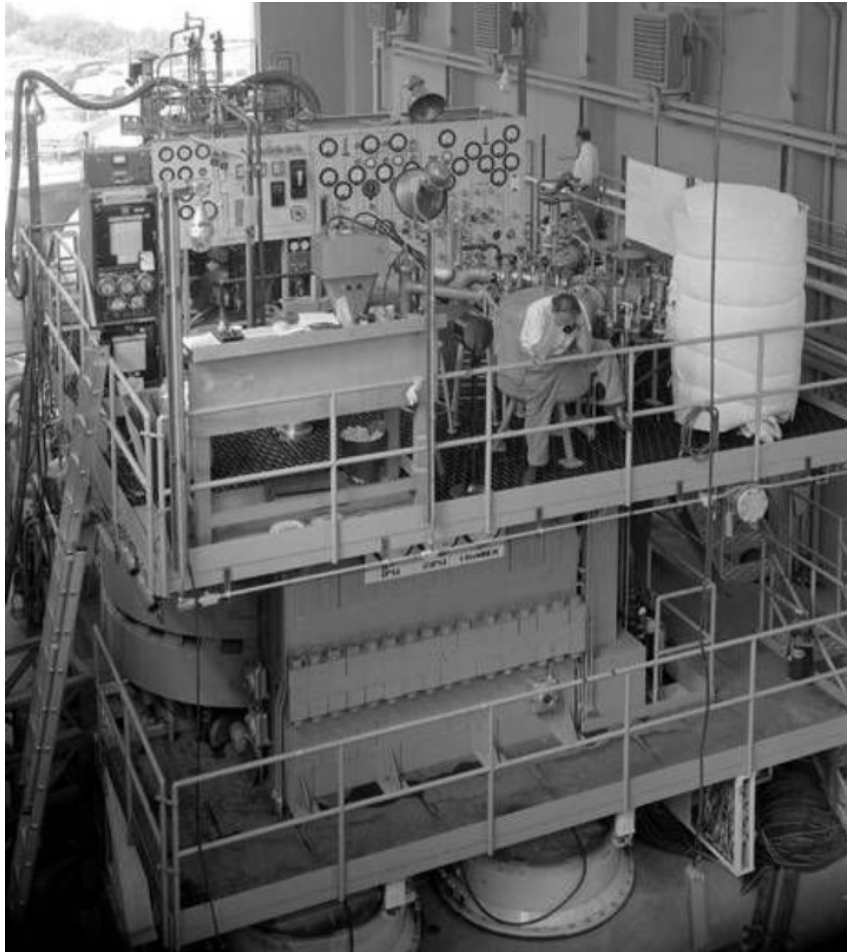
# Theoretical framework

- Originating with Ormerod's (2013) contribution that Pickering's (1993, 1995) Mangle of Practice appears to offer
  - A useful construct for the analysis of PSM workshops (White, Yearworth, & Burger, 2015)
  - An inspiration for OR practitioners to produce more informative case studies from their work
- Building on points of correspondence between Checkland's and Pickering's thinking leads us to propose that the **performative idiom** offers an ideal theoretical perspective for analyzing PSM interventions generally
- Journeying via a key question whether the Mangle offers a similar view to what Checkland (1981) called a "*phenomenological investigation into the meanings which actors in a situation attribute to the reality they perceive*"

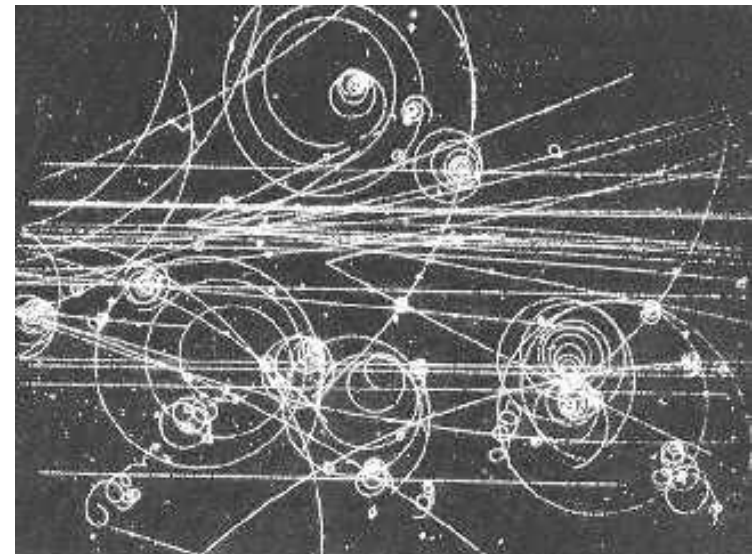
# The performative idiom

- The “*performative idiom, capable of recognizing that the world is continually doing things and so are we*” (Pickering, 1995 p. 144)
- Such a view requires the concept of agency: who or what motivates and controls the forward momentum of action?
- Actor-network theory (ANT) expands the humanistic view of SSK with the claim that material, machinic things (such as radar and computers) can also be taken to provide agency ...Pickering goes a step further allowing agency to reside in ‘concepts’ as well
- Pickering’s (1995) perspective focuses upon achieving a “*real-time understanding of practice*” by exploring how “*human and nonhuman agency...temporally intertwine*”

# About machines



(Pickering, 1995, Ch 2)



# The PSM as a machine

- View a PSM engagement as the operation of an *ad hoc* machine brought into existence to translate actors' knowledge into specific, context bound action
- We are not that interested in what that knowledge is or where it comes from, but we do care how the Actors present incorporate this knowledge into the design and operation of the machine

# The PSM as a machine

- We can view modelling as the enactment of the design process for that machine, the model as a *dynamic* blueprint
- Once actions have been identified the machine is dismantled, the blueprint is thrown away
- This machinic interpretation of PSM interventions follows directly from the performative idiom and sits well with Key's (1995, 1998) view of OR as technology

# Emergent phenomena

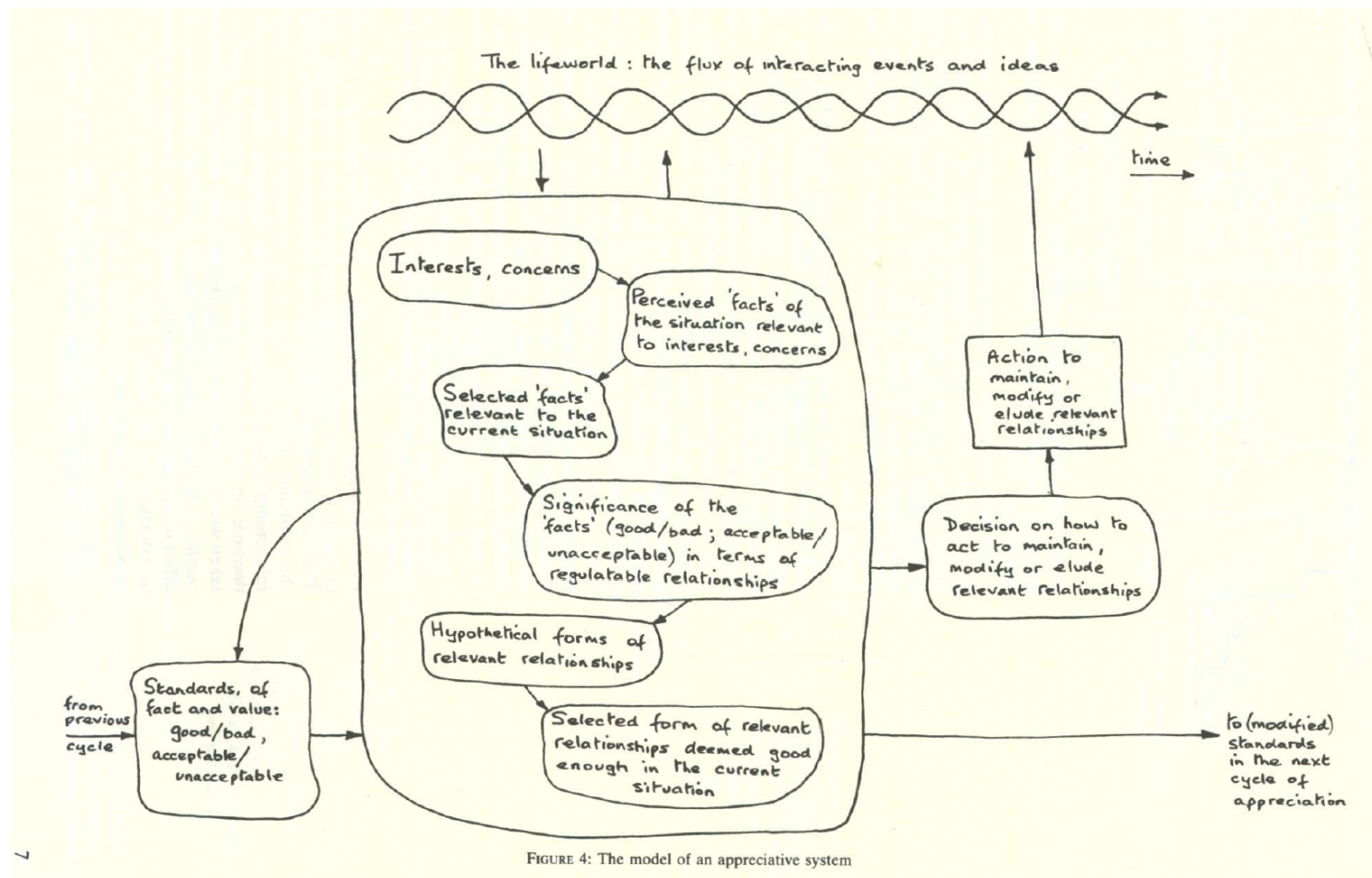
- Actions are emergent phenomena from the mangling of agency taking place in the design and operation of the machine
- They are the cultural extension of human intentionality that will in turn, inevitably lead to the need to build further machines to deal with new resistances

# New resistances

- New resistances are reminiscent of Beer's (2002) idea of POSIWID and perhaps also of Ackoff's Interactive Planning
- The machine modifies its problem context in ways that may not be expected. New machines, new instances of PSM intervention, should be seen as inevitable and entirely normal

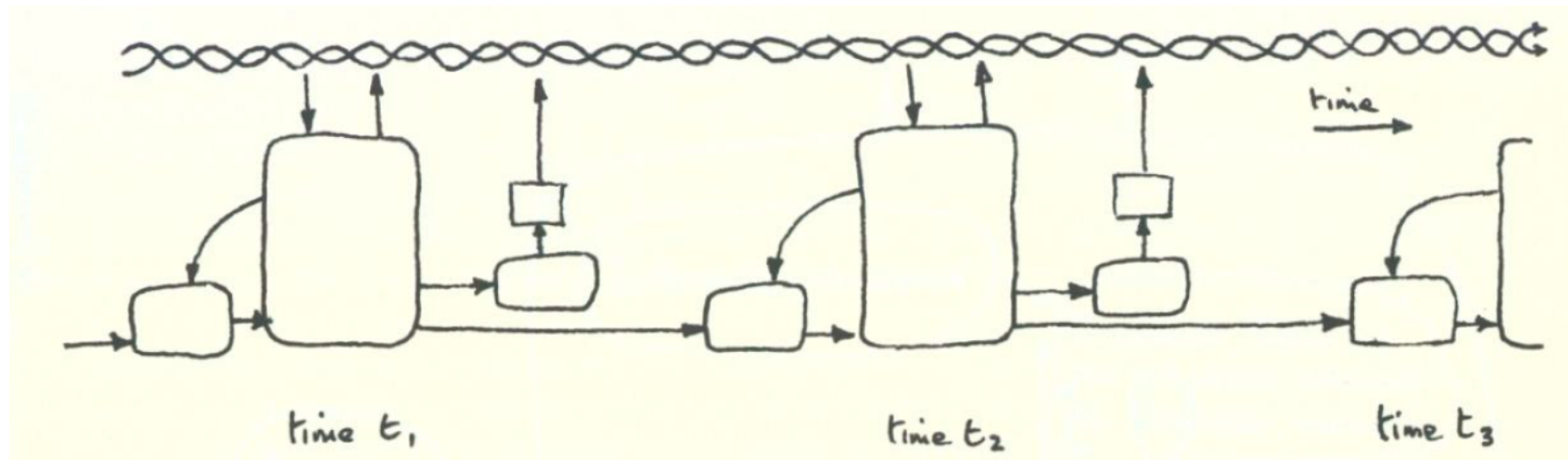


# Note similarities to Vickers



(Checkland & Casar, 1986)

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# Designing the machine

- The Generic Constitutive Definition (GCD) of Yearworth and White (2014) sets out some guidelines for the design of the machine (the what) but not its detailed operation (the how)
  - *“It is the Constitutive Rules which are of greater interest since they answer the stark question: What is SSM? If there are no such rules then in what sense can SSM be said to exist?”* (Checkland & Scholes, 1999, p. 285)
  - The GCD describes essential and common features of PSMs
- The specific machine is tailored for its task from standard components, but should operate in familiar ways

# The PSM machine in operation



# What is being mangled?

- Extending from a simple CATWOE view where *all elements* become Agents (Actors, Actants) that are “*Transitioning between being real entities and social constructs and back again*” (Pickering, 1995, p12)
  - Customers, Actors, Owners
    - Identities
  - Weltanschauung, Transformation
    - Intents, actions
  - Environment
    - Entering the machine in proxy form (White, Yearworth, & Burger, 2015)
    - Changed by actions
- New elements arising from the performative idiom
  - Models
    - As boundary objects (Franco, 2013) and recent presentation at GDN of Franco & Greiffenhaggen (2015)
  - The PSM itself
    - As an ad hoc machine, or instrument

# Discussion

- Checkland's pragmatic and Pickering's sociological views align well
- Whilst Checkland constructed a strong theoretical foundation for SSM on *inter alia* Vickers' appreciative systems, ANT and the Mangle were too late to make a difference
- The mangle and the performative idiom enable us to revisit Keys' idea of OR as technology through the lens of socio-materiality (Holland & Cole, 1995) and provide us with an excellent metaphor for organising our enquiry into PSMs
  - PSMs in use as ad hoc machines (instruments)
  - Each PSM engagement is conducted as an experiment which uses the instrument

# Conclusions

- The GCD describes the essential components i.e. *what is used to construct the PSM instrument*
  - Methodological learning is seen as refining instrument construction from experiment to experiment
- Behavioural OR (Hämäläinen, Luoma, & Saarinen, 2013) sets out the need for analysis at the detailed level i.e. *how the PSM instrument is used*
  - Ethnomethodology is an ideal choice for studying the operation of the instrument (observing the *doing*)
  - ANT and AT provide ideal behavioural lenses for analysis

# Postscript

- The performative idiom was proposed by Pickering motivated by his ambition of moving the sociology of scientific knowledge (SSK) forward and to re-theorise the field of STS
- What of the *representational* idiom? The knowledge created from the doing?
  - Knowledge ‘outputs’ created by the use of instruments – the traditional outcomes of scientific endeavour
  - If this presentation is a convincing argument for the machinic interpretation of PSMs – and their analysis as such – what are the the outputs from our analyses that correspond to the representational idiom?
  - Logically, theories in the realm of group decision making



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# Questions?

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